Omnitron Systems Technology, Inc.

FlexPoint™ 232 User Instructions

Description:

The FlexPoint™ 232 converts between asynchronous RS-232 and fiber with baud-rate auto-sensing, supporting speeds of up to 115,200 baud. The following multimode (MM) and single-mode (SM) models are described here:

Model	Fiber	Distances
4480	MM, SC	2.5 km
4481	MM, ST	2.5 km
4482	MM, SC	5 km
4483	MM, ST	5 km
4484	SM, SC	30 km
4485	SM, ST	30 km
4486	SM, LH, SC	60 km
4487	MM, MT-RJ	5 km
4488	SM, MT-RJ	30 km
4489-2	SM, LC	30 km

Power Adapter Notice:

1. When used in a stand-alone configuration, this product is intended to be and must be used only with a Listed Direct Plug-In Power Unit marked "Class 2" and rated at 9Vdc, 1 Amp.
2. This product should always be used only with Omnitron Supplied Power Unit model number 9113-PS.

WARNING!

Before inserting the Power Adapter, verify that the power on the unit is appropriate for your AC line voltage source.

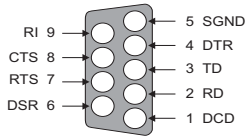
LED Indicators:

LED	Color	Function	Description
Power:	Yellow	Solid	Power applied
DTE/DCE:	Green	Solid	DTE selected
	Yellow	Solid	DCE selected
DB9/232:	Green	Solid/Blink	Link / Data received
Fiber Link:	Green	Solid	Link
	Green	Blink fast	Fiber loop-back is good
	Green	Blink slow	Error in fiber loop-back

Switches:

Description	Function
DB9 to DTE / DCE:	Data Terminal / Data Communication
Fiber Loop-back:	Loop-back / Normal

FlexPoint 232 Pin Assignments



PIN	PIN SIGNAL	ABBR	DTE	DCE
1	Data Carrier Detect	DCD	IN	OUT
2	Received Data	RD	IN	OUT
3	Transmitted Data	TD	OUT	IN
4	Data Terminal	DTR	OUT	IN
5	Signal Ground	SGND	-	-
6	Data Set Ready	DSR	IN	OUT
7	Request To Send	RTS	OUT	IN
8	Clear To Send	CTS	IN	OUT
9	Ring Indicator	RI	IN	OUT

Mounting and Cable Attachment:

The FlexPoint 232 can be solo-mounted using a wall-mounting kit or the DIN-rail kit. It can also be rack-mounted using a 5-position shelf or a high-density 14-unit FlexPoint Powered Chassis.

RS-232 Cable Attachment:

Attach the FlexPoint 232 port via a male DB9 terminated or unterminated straight through RS-232 serial cable to a DTE or DCE device.

Note: Use RS-232 cables that are compliant with the specifications that are outlined in RS-232 cable specifications.

Fiber Optic Cable Attachment:

Connect the fiber cables between the two FlexPoint 232 converters. The transmit (Tx) must attach to the receive side and the receive (Rx) must attach to the transmit side.

Note: Use fiber cables that are compliant with the specifications that are outlined in fiber cable specifications.

Switch Settings:

"DB9 to DTE/DCE" Switch:

When connecting the RS-232 cable to terminal equipment such as a computer or controller, set the switch to "DB9 to DCE" (down, factory setting). When connecting to communication equipment such as a modem or printer, set the switch to "DB9 to DTE" (up).

(Please refer to pin assignments for more detailed information)

"Fiber Loopback" Switch:

This switch will allow the entire fiber segment to be tested at either of the FlexPoint 232 converters without having to set switches on both units simultaneously. When the switch is set to "Fiber Loopback", the local unit's fiber Tx port will be encoded to carry a remote loopback protocol over the fiber cable. This remote loopback protocol will set the far end FlexPoint 232 converter to a loopback mode of operation and return a signal over the fiber cable to the originating unit. An LED on the local and remote FlexPoint 232 converters will blink fast to show a confirmation that the fiber segment is communicating properly between the converters. A slow blink will indicate an error condition over the fiber segment. By returning the switch to the "normal" position the converters will resume to normal operation.

Fiber Cable Specifications:

Multimode (standard)	
Cable:	50/125, 62.5/125, 100/140 μm
Wavelength:	850nm
Max Distance:	2.5 km
Multimode (long-haul)	
Cable:	50/125, 62.5/125, 100/140 μm
Wavelength:	1310nm
Max Distance:	5 km
Singlemode	
Cable:	9/125 μm
Wavelength:	1310nm
Max Distance:	30 km
Singlemode (long-haul)	
Cable:	9/125 μm
Wavelength:	1310nm
Max Distance:	60 km

RS-232 Cable Specifications:

Gauge	22 to 24 AWG
Mutual Capacitance	12 to 50 pF/ft.
Maximum distance	15.2 m/50 ft.

User Warranty Registration

Please register on-line @ **http://www.omnitron-systems.com** or complete both sides and mail or fax this registration form to:

Omnitron Systems Technology, Inc.
140 Technology Drive, #500
Irvine, CA 92618, USA
Fax: (949) 250-6514

Name: _____
Company: _____
Address: _____
_____
City: _____ State: _____ Zip Code: _____
Country: _____
Phone: _____ Fax: _____
E-mail: _____

Please complete both sides of this form

Warning

The operating description in this Instruction Manual is for use by qualified personnel only. To avoid electrical shock, do not perform any servicing of this unit other than that contained in the operating instructions, unless you are qualified and certified to do so by Omnitron Systems Technology, Inc.

Caution

All user-required operations can be performed without opening the unit. Never attempt to open or remove the cover or tamper with the unit.

Warranty

This product is warranted to the original purchaser against defects in material and workmanship for a period of TWO YEARS from the date of shipment. A LIFETIME warranty may be obtained by the original purchaser by REGISTERING this product with Omnitron within 90 days from the date of shipment. TO REGISTER, COMPLETE AND MAIL OR FAX THE REGISTRATION PORTION OF THIS INSTRUCTION MANUAL TO THE INDICATED ADDRESS. Or you may register your product on the internet at http://www.omnitron-systems.com. During the warranty period, Omnitron will, at its option, repair or replace a product which is proven to be defective.

For warranty service, the product must be sent to an Omnitron designated facility, at Buyer's expense. Omnitron will pay the shipping charge to return the product to Buyer's designated US address using Omnitron's standard shipping method.

Limitation of Warranty

The foregoing warranty shall not apply to defects resulting from improper or inadequate use and/or maintenance of the equipment by Buyer, Buyer-supplied equipment, Buyer-supplied interfacing, unauthorized modifications or tampering with equipment (including removal of equipment cover by personnel not specifically authorized and certified by Omnitron), or misuse, or operating outside the environmental specification of the product (including but not limited to voltage, ambient temperature, radiation, unusual dust, etc.), or improper site preparation or maintenance.

No other warranty is expressed or implied. Omnitron specifically disclaims the implied warranties of merchantability and fitness for any particular purpose.

Exclusive Remedies

The remedies provided herein are the Buyer's sole and exclusive remedies. Omnitron shall not be liable for any direct, indirect, special, incidental, or consequential damages, whether based on contract, tort, or any legal theory.

Technical Support:

For help with this product, contact our Tech. Support:

Phone: (949) 250-6510
Fax: (949) 250-6514
Address: Omnitron Systems Technology, Inc.
140 Technology Drive, #500
Irvine, CA 92618 USA
E-mail: support@omnitron-systems.com
URL: http://www.omnitron-systems.com

Form: 040-04480-001B 11/07

User Warranty Registration

Please register on-line @ **http://www.omnitron-systems.com** or complete both sides and mail or fax this registration form to:

FlexPoint Type: 232, Fiber Type: _____ Connector: _____
Model: _____
Serial Number: _____ Purchase Date: _____
Purchased From: _____
Address: _____
_____
City: _____ State: _____ Zip Code: _____
Country: _____
Comments and Suggestions: _____
_____
_____
_____

Please complete both sides of this form

User Warranty Registration

Please register on-line @ **http://www.omnitron-systems.com** or complete both sides and mail or fax this registration form to:

FlexPoint Type: 232, Fiber Type:_____Connector: _____

Model: _____

Serial Number: _____ Purchase Date: _____

Purchased From: _____

Address: _____

City: _____ State: _____ Zip Code: _____

Country: _____

Comments and Suggestions: _____

Please complete both sides of this form

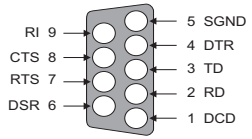
LED Indicators:

LED	Color	Function	Description
Power:	Yellow	Solid	Power applied
DTE/DCE:	Green	Solid	DTE selected
	Yellow	Solid	DCE selected
DB9/232:	Green	Solid/Blink	Link / Data received
Fiber Link:	Green	Solid	Link
	Green	Blink fast	Fiber loop-back is good
	Green	Blink slow	Error in fiber loop-back

Switches:

Description	Function
DB9 to DTE / DCE:	Data Terminal / Data Communication
Fiber Loop-back:	Loop-back / Normal

FlexPoint 232 Pin Assignments



PIN	PIN SIGNAL	ABBR	DTE	DCE
1	Data Carrier Detect	DCD	IN	OUT
2	Received Data	RD	IN	OUT
3	Transmitted Data	TD	OUT	IN
4	Data Terminal	DTR	OUT	IN
5	Signal Ground	SGND	-	-
6	Data Set Ready	DSR	IN	OUT
7	Request To Send	RTS	OUT	IN
8	Clear To Send	CTS	IN	OUT
9	Ring Indicator	RI	IN	OUT

Warning

The operating description in this Instruction Manual is for use by qualified personnel only. To avoid electrical shock, do not perform any servicing of this unit other than that contained in the operating instructions, unless you are qualified and certified to do so by Omnitron Systems Technology, Inc.

Caution

All user-required operations can be performed without opening the unit. Never attempt to open or remove the cover or tamper with the unit.

Warranty

This product is warranted to the original purchaser against defects in material and workmanship for a period of TWO YEARS from the date of shipment. A LIFETIME warranty may be obtained by the original purchaser by REGISTERING this product with Omnitron within 90 days from the date of shipment. TO REGISTER, COMPLETE AND MAIL OR FAX THE REGISTRATION PORTION OF THIS INSTRUCTION MANUAL TO THE INDICATED ADDRESS. Or you may register your product on the internet at http://www.omnitron-systems.com. During the warranty period, Omnitron will, at its option, repair or replace a product which is proven to be defective.

For warranty service, the product must be sent to an Omnitron designated facility, at Buyer's expense. Omnitron will pay the shipping charge to return the product to Buyer's designated US address using Omnitron's standard shipping method.

Limitation of Warranty

The foregoing warranty shall not apply to defects resulting from improper or inadequate use and/or maintenance of the equipment by Buyer, Buyer-supplied equipment, Buyer-supplied interfacing, unauthorized modifications or tampering with equipment (including removal of equipment cover by personnel not specifically authorized and certified by Omnitron), or misuse, or operating outside the environmental specification of the product (including but not limited to voltage, ambient temperature, radiation, unusual dust, etc.), or improper site preparation or maintenance.

No other warranty is expressed or implied. Omnitron specifically disclaims the implied warranties of merchantability and fitness for any particular purpose.

Exclusive Remedies

The remedies provided herein are the Buyer's sole and exclusive remedies. Omnitron shall not be liable for any direct, indirect, special, incidental, or consequential damages, whether based on contract, tort, or any legal theory.

Technical Support:

For help with this product, contact our Tech. Support:

Phone: (949) 250-6510
Fax: (949) 250-6514
Address: Omnitron Systems Technology, Inc.
140 Technology Drive, #500
Irvine, CA 92618 USA
E-mail: support@omnitron-systems.com
URL: http://www.omnitron-systems.com

Form: 040-04480-001B 11/07

Omnitron Systems Technology, Inc.

FlexPoint™ 232 User Instructions

Description:

The FlexPoint™ 232 converts between asynchronous RS-232 and fiber with baud-rate auto-sensing, supporting speeds of up to 115,200 baud. The following multimode (MM) and single-mode (SM) models are described here:

Model	Fiber	Distances
4480	MM, SC	2.5 km
4481	MM, ST	2.5 km
4482	MM, SC	5 km
4483	MM, ST	5 km
4484	SM, SC	30 km
4485	SM, ST	30 km
4486	SM, LH, SC	60 km
4487	MM, MT-RJ	5 km
4488	SM, MT-RJ	30 km
4489-2	SM, LC	30 km

Power Adapter Notice:

1. When used in a stand-alone configuration, this product is intended to be and must be used only with a Listed Direct Plug-In Power Unit marked "Class 2" and rated at 9Vdc, 1 Amp.
2. This product should always be used only with Omnitron Supplied Power Unit model number 9113-PS.

WARNING!

Before inserting the Power Adapter, verify that the power on the unit is appropriate for your AC line voltage source.

Mounting and Cable Attachment:

The FlexPoint 232 can be solo-mounted using a wall-mounting kit or the DIN-rail kit. It can also be rack-mounted using a 5-position shelf or a high-density 14-unit FlexPoint Powered Chassis.

RS-232 Cable Attachment:

Attach the FlexPoint 232 port via a male DB9 terminated or unterminated straight through RS-232 serial cable to a DTE or DCE device.

Note: Use RS-232 cables that are compliant with the specifications that are outlined in RS-232 cable specifications.

Fiber Optic Cable Attachment:

Connect the fiber cables between the two FlexPoint 232 converters. The transmit (Tx) must attach to the receive side and the receive (Rx) must attach to the transmit side.

Note: Use fiber cables that are compliant with the specifications that are outlined in fiber cable specifications.

Switch Settings:

"DB9 to DTE/DCE" Switch:

When connecting the RS-232 cable to terminal equipment such as a computer or controller, set the switch to "DB9 to DCE" (down, factory setting). When connecting to communication equipment such as a modem or printer, set the switch to "DB9 to DTE" (up).

(Please refer to pin assignments for more detailed information)

"Fiber Loopback" Switch:

This switch will allow the entire fiber segment to be tested at either of the FlexPoint 232 converters without having to set switches on both units simultaneously. When the switch is set to "Fiber Loopback", the local unit's fiber Tx port will be encoded to carry a remote loopback protocol over the fiber cable. This remote loopback protocol will set the far end FlexPoint 232 converter to a loopback mode of operation and return a signal over the fiber cable to the originating unit. An LED on the local and remote FlexPoint 232 converters will blink fast to show a confirmation that the fiber segment is communicating properly between the converters. A slow blink will indicate an error condition over the fiber segment. By returning the switch to the "normal" position the converters will resume to normal operation.

Fiber Cable Specifications:

Multimode (standard)	
Cable:	50/125, 62.5/125, 100/140 μm
Wavelength:	850nm
Max Distance:	2.5 km
Multimode (long-haul)	
Cable:	50/125, 62.5/125, 100/140 μm
Wavelength:	1310nm
Max Distance:	5 km
Singlemode	
Cable:	9/125 μm
Wavelength:	1310nm
Max Distance:	30 km
Singlemode (long-haul)	
Cable:	9/125 μm
Wavelength:	1310nm
Max Distance:	60 km

RS-232 Cable Specifications:

Gauge	22 to 24 AWG
Mutual Capacitance	12 to 50 pF/ft.
Maximum distance	15.2 m/50 ft.

User Warranty Registration

Please register on-line @ **http://www.omnitron-systems.com** or complete both sides and mail or fax this registration form to:

Omnitron Systems Technology, Inc.
140 Technology Drive, #500
Irvine, CA 92618, USA
Fax: (949) 250-6514

Name: _____

Company: _____

Address: _____

City: _____ State: _____ Zip Code: _____

Country: _____

Phone: _____ Fax: _____

E-mail: _____

Please complete both sides of this form